

2M Matte White Polyimide/S8088/50#SCK

Product Data Sheet

Spec#: 78030

| Facestock | | Facestock physical properties | | | | | |
|--|-------------------------------|--------------------------------------|--------|-----|--------------|---------|-----------|
| 2 Mil Matte White TC Polyimide is a durable matte white top coated polyimide film with excellent tear strength, heat resistance, dimensional stability, and chemical resistance. The high opacity white top coating was specifically designed for thermal transfer printing and offers excellent scuff, scratch, UV, high temperature, and solvent resistance. | | Imperial Value | Units | | Metric Value | Units | |
| | Caliper: ASTM D1000 | 0.0027 | inches | | 68.58 | microns | |
| | Tensile: ASTM D882 | MD | 34,000 | PSI | | 2,390 | kg/sq. cm |
| | | CD | 34,000 | PSI | | 2,390 | kg/sq. cm |

| Adhesive | | Adhesive physical properties | | | | | |
|--|--|-------------------------------------|---------|---|--------------|----------|---|
| S8088 is a high performance acrylic based pressure sensitive adhesive featuring high ultimate adhesion and excellent resistance to PCB processing chemicals. Capable of withstanding high temperatures for extended periods of time. | | Imperial Value | Units | | Metric Value | Units | |
| | Type: | solvent acrylic | | | | | |
| | Caliper: ASTM D1000 | 0.0009 | inches | | 22.86 | microns | |
| | Standard Coat Wt: | | | | 27 | g/sq m | |
| | Minimum Appl Temp: | 50 | F | | 10 | C | |
| | Service Temp Range: | Min | -40 | F | | -40 | C |
| | | Max | 500 | F | | 260 | C |
| | Loop Tack Stainless Steel: PSTC11 | 31.5 | oz/inch | | 34.7 | N/100 mm | |

| Liner | | Liner physical properties | | | | | |
|--|--|----------------------------------|--------|---------|--------------|---------|--------|
| 50# Super Calendered kraft bleached paper stock with very good die cutting and matrix stripping properties. Used for standard roll-to-roll applications. Supplied without Anit-Block Coating. Not recommended for sheeting applications. | | Imperial Value | Units | | Metric Value | Units | |
| | Caliper: ASTM D1000 | 0.0032 | inches | | 81.2800 | microns | |
| | Basis Wt: TAPPI T410 <small>* (24" x 36" 500 sheets)</small> | 57.7 | lbs | | 92.3 | g/sq m | |
| | Tensile: ASTM D882 | MD | 51.0 | lb/inch | | 224.4 | N/25mm |
| | | CD | 22.7 | lb/inch | | 99.9 | N/25mm |
| | Tear: | MD | 2.0 | ounces | | 56.6 | grams |

| | | | | | | |
|--|------------|----|-----|--------|------|-------|
| | TAPPI T414 | CD | 2.7 | ounces | 76.4 | grams |
|--|------------|----|-----|--------|------|-------|

| | | |
|--|-----------------------|---|
| Liner Release: TMLI 90° removal of Liner from Facestock. | | Total Construction Caliper (approximate): |
| Rate of Removal | Grams/2" Width | |
| 400 inches/min. | 55 | 0.0068 inches (6.8 mils; 172.7 microns) |

Features and Benefits

- Durable high temperature-resistant facestock and adhesive
- Excellent tear strength and dimensional stability
- Good chemical resistance
- UL Recognized; File MH17205

Service Temperatures

Short term (90 seconds): 572oF (300oC) moderate discoloration, but still functional

Medium term (2 hours): 338oF (170oC) no visible effect

Long term (1000 hours): 212oF (100oC) no visible effect

Applications and Uses

This product is ideal for labeling printed circuit boards, as well as for automotive, aerospace, medical, and manufacturing applications where high temperature and solvent resistance are critical. It is able to withstand surface mount circuit board processes on either the top or bottom side of the board. This product can also be used on the top side of the board in mixed processes and is suitable for use on the bottom side when directly exposed to wave solder environment. This product meets MIL-STD-202G, Method 215J.

Printing and Converting

The topcoat is designed for thermal transfer and flexo printing when used with appropriate ribbons, and will withstand temperature spikes of up to 500oF (260oC). Suggested thermal transfer ribbons: DNP "R-510" and "R-300". Other ribbons might be suitable. Testing is highly recommended to insure suitable results. It might be necessary to expose printed labels to high heat in order to "set" the print, prior to any print testing. Due to the thinness of the facestock, auto-dispensing and application should be thoroughly tested prior to committing to production.

RoHS/Regulation 2002/95/EU

The substances listed in article 4 lid 1 of 2002/95/EU (RoHS) are not intentionally used in this product. The concentration limits of these substances will not exceed the set maximum concentration limits as provided in the proposed amendment for 2002/95/EU.

Shelf Life

Unless specified otherwise in this document, one year when stored at 72°F at 50% RH

Note:

The technical data presented is from tests we believe to be reliable but should be considered representative or typical only and should not be used for specifications purposes. This product should be tested thoroughly under end-use conditions to ensure it meets the requirements of the specific application.

Appendix

Performance Data:

The following technical data should be considered representative or typical only and should not be used for specification purposes.

| Surface | Initial (15 minute dwell) | | 72 Hours at Room Temperature | | 72 Hours at 120°F | | 96 Hours at 150°F (65°C) & 80% Relative Humidity | |
|--------------------|------------------------------|---------|---------------------------------|---------|-------------------|---------|---|---------|
| | oz/in | N/100mm | oz/in | N/100mm | oz/in | N/100mm | oz/in | N/100mm |
| 1. Stainless Steel | 31.5 | 34.7 | 42.2 | 46.4 | 53.3 | 58.6 | 49.9 | 54.9 |
| 2. Aluminum | 39.7 | 43.7 | 48.8 | 53.7 | 61.1 | 67.2 | 58.9 | 64.8 |
| 3. Polypropylene | 0.32 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. HDPE | 0 | 0 | 0.8 | 0.9 | 0 | 0 | 4.32 | 4.8 |
| 5. LDPE | 0 | 0 | 0 | 0 | 1.76 | 1.9 | 0 | 0 |
| 6. ABS Plastic | 42.9 | 47.2 | 49.9 | 54.9 | 36.6 | 40.3 | 21.6 | 23.8 |

Environmental Performance: Chemical Resistance test results

The performance results are based on 4 hour immersions at room temperature unless otherwise noted (gasoline is 1 hour). Samples were applied to stainless steel panels and conditioned for 24 hours before immersion and evaluated immediately upon removal. Adhesion measured at 180° peel.

| Chemical | Adhesion to Stainless Steel | | Visual | Edge |
|--------------------|-----------------------------|---------|------------|----------------|
| | oz/in | N/100mm | Appearance | Penetration mm |
| 1. 70% IPA | 74.2 | 81.6 | No Change | 0 |
| 2. Tide- Detergent | 30.1 | 33.1 | No Change | 0 |

| | | | | |
|-----------------------|------|------|-----------|---|
| 3. Engine Oil (10W30) | 79.7 | 87.7 | No Change | 0 |
| 4. Water | 60.3 | 66.3 | No Change | 0 |
| 5. Ammonia - pH 11 | 58.6 | 64.5 | No Change | 0 |
| 6. 409- Cleaner | 61.6 | 67.8 | No Change | 0 |
| 7. Toluene | 44.3 | 48.7 | No Change | 0 |
| 8. Brake Fluid | 79.5 | 87.5 | No Change | 0 |
| 9. Reference Fuel C | 55 | 60.5 | No Change | 0 |
| 10. Kerosene K1 | 77.4 | 85.1 | No Change | 0 |
| 11. Heptane | 71.6 | 78.8 | No Change | 0 |

Compliance Recognition: UL CSA C-U



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| Substrates | Minimum Temperature | | Maximum Temperature | | (I=Indoor Only I/O=Indoor & Outdoor) |
|---------------------|---------------------|-----|---------------------|-----|---|
| | °F | °C | °F | °C | |
| 1. Aluminum | -40 | -40 | 302 | 150 | I |
| 2. Stainless Steel | -40 | -40 | 212 | 100 | I |
| 3. Galvanized Steel | -40 | -40 | 302 | 150 | I |
| 4. Epoxy Resin PWB | -40 | -40 | 212 | 100 | I |

Recognized Ribbons: Dai Nippon "R-300", Dai Nippon "R-510", ITW "B324"

409- is a registered trademark of the Clorox Company
Tide- is a registered trademark of the Procter & Gamble Company

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